

WHAT IS CLAIMED IS:

1. A method of increasing anti-tumor effect of interferon, said method comprising administering to a patient in need thereof an effective amount of MIS and an effective amount of interferon that results in decreased side-effects, thereby increasing anti-tumor effect of interferon.
2. The method of claim 1, wherein said patient has primary tumor growth.
3. The method of claim 1, wherein said patient has metastatic tumor growth.
4. The method of claim 1, wherein said patient has a tumor selected from the group consisting of vulvar epidermoid carcinoma, cervical carcinoma, endometrial adenocarcinoma, ovarian adenocarcinoma, and ocular melanoma.
5. The method of claim 1, wherein said patient has a tumor selected from the group consisting of prostate, lymphoid, breast, cutaneous and germ cell tumors.
6. The method of claim 1, wherein said MIS has a molecular weight of 140 kDa or 70 kDa.
7. The method of claim 6, wherein said MIS is proteolytically cleaved by reacting with a proteolytic compound to form protein fragments having a molecular weight of about 57 kDa and 12.5 kDa.
8. The method of claim 1, wherein said MIS is rhMIS.

9. The method of claim 1, wherein said MIS is C-terminal fragment of MIS substantially free of N-terminal fragment.

10. The method of claim 9, wherein said C-terminal fragment of MIS has a molecular weight of about 25 kDa or about 12.5 kDa.

11. The method of claim 10, wherein the C-terminal fragment of MIS is derived from rhMIS.

12. The method of claim 1, wherein said interferon is selected from the group consisting of interferon- $\alpha$ , interferon- $\beta$ , interferon- $\omega$ , interferon- $\tau$ , and interferon- $\gamma$ .

13. The method of claim 12, wherein said interferon is interferon- $\gamma$ .

14. The method of claim 1, wherein said interferon is administered in an amount of about  $1 \times 10^1$  to  $1 \times 10^5$  International Units per administration.

15. The method of claim 1, wherein said interferon is administered in an amount of about  $1 \times 10^2$  to  $1 \times 10^5$  International Units per administration.

16. The method of claim 1, wherein said interferon is administered in an amount of about  $1 \times 10^3$  to  $1 \times 10^5$  International Units per administration.

17. The method of claim 1, wherein said interferon is administered in an amount of less than  $1 \times 10^6$  International Units per administration.

18. A method of inhibiting growth of tumor, said method comprising administering to a patient an effective amount of MIS and an effective amount of interferon that results in decreased side-effects.

19. The method of claim 18, wherein said patient has primary tumor growth.
20. The method of claim 18, wherein said patient has metastatic tumor growth.
21. The method of claim 18, wherein said patient has a tumor selected from the group consisting of vulvar epidermoid carcinoma, cervical carcinoma, endometrial adenocarcinoma, ovarian adenocarcinoma, and ocular melanoma.
22. The method of claim 18, wherein said patient has a tumor selected from the group consisting of prostate, lymphoid, breast, cutaneous and germ cell tumors.
23. The method of claim 18, wherein said MIS has a molecular weight of 140 kDa or 70 kDa.
24. The method of claim 23, wherein said MIS is proteolytically cleaved by reacting with a proteolytic compound to form protein fragments having a molecular weight of about 57 kDa and 12.5 kDa.
25. The method of claim 18, wherein said MIS is rhMIS.
26. The method of claim 18, wherein said MIS is C-terminal fragment of MIS substantially free of N-terminal fragment.
27. The method of claim 26, wherein said C-terminal fragment of MIS has a molecular weight of about 25 kDa or about 12.5 kDa.

28. The method of claim 27, wherein the C-terminal fragment of MIS is derived from rhMIS.

29. The method of claim 18, wherein said interferon is selected from the group consisting of interferon- $\alpha$ , interferon- $\beta$ , interferon- $\omega$ , interferon- $\tau$ , and interferon- $\gamma$ .

30. The method of claim 18, wherein said interferon is interferon- $\gamma$ .

31. The method of claim 18, wherein said interferon is administered in an amount of about  $1 \times 10^1$  to  $1 \times 10^5$  International Units per administration.

32. The method of claim 18, wherein said interferon is administered in an amount of about  $1 \times 10^2$  to  $1 \times 10^5$  International Units per administration.

33. The method of claim 18, wherein said interferon is administered in an amount of about  $1 \times 10^3$  to  $1 \times 10^5$  International Units per administration.

34. The method of claim 18, wherein said interferon is administered in an amount of less than  $1 \times 10^6$  International Units per administration.

35. A tumor inhibiting pharmaceutical composition comprising an effective tumor inhibiting amount of MIS and interferon, wherein said effective tumor inhibiting amount of interferon is an amount that results in decreased side effects.